

## **A New Species of the Genus *Periphyllus* (Homoptera: Aphididae: Chaitophorinae) from Korea**

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### **ABSTRACT**

A new species, *Periphyllus unmoonsanensis* n. sp., arising on the *Acer palmatum* is described from Korea.

Key words: Homoptera, Aphididae, *Periphyllus* new species, Korea

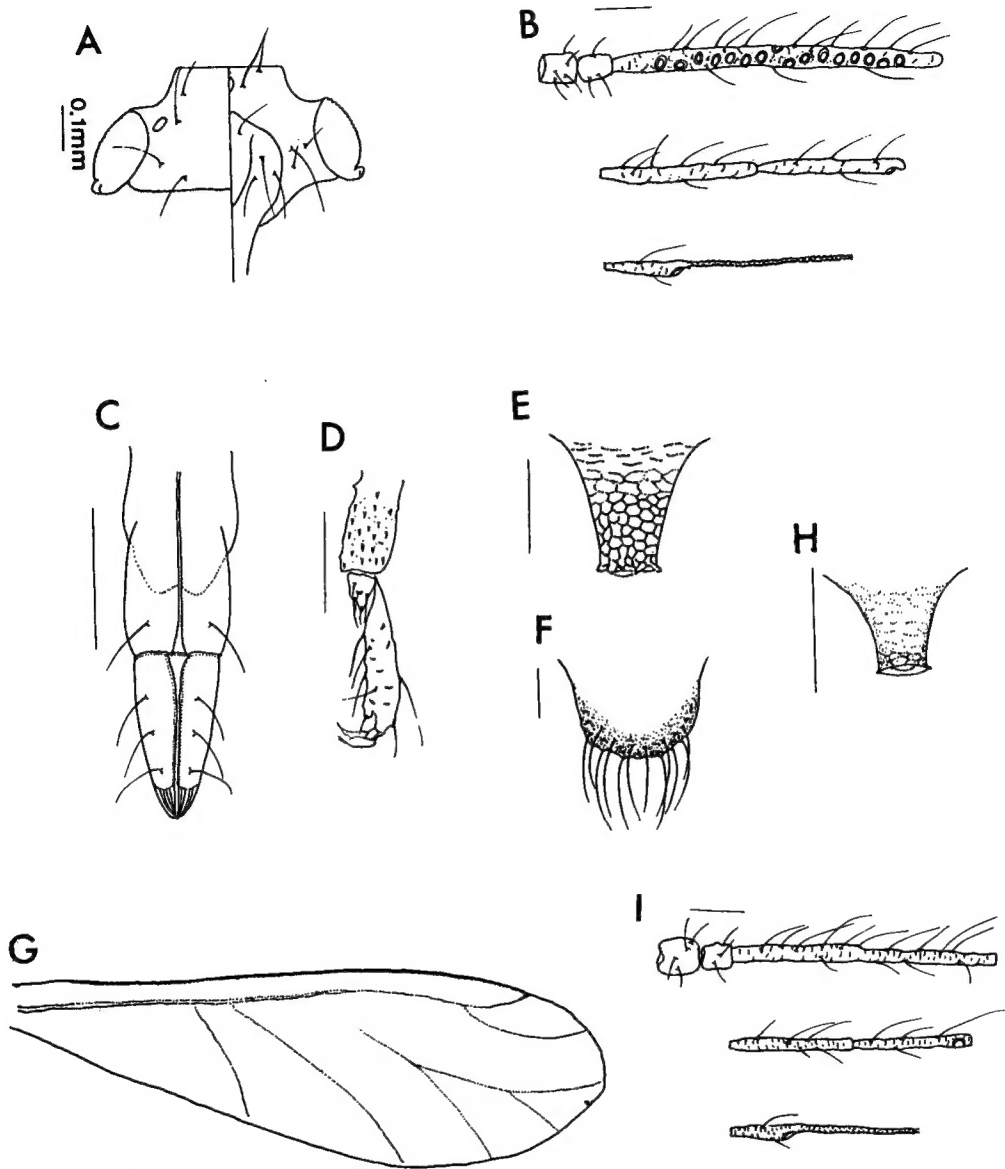
### **INTRODUCTION**

During our research on the biological adaptation and diversity of maple aphids to the host plants, we could examine many specimens of the genera, *Yamatocallis* and *Periphyllus* belonging to the Chaitophorinae, which is rather hairish on the body (Ahn and Park, 1993; Park and Ahn, 1994; Park and Park, 1995). Both genera have a prominent ecological features well adapted to the maple trees as a host plant. Among them, a species arising on *Acer palmatum* collected at the Mt. Unmoonsan was found to be a new to science. All type specimens are deposited at the Department of Biology, Kyungpook National University.

#### ***Periphyllus unmoonsanensis* n. sp. 운문진사진딧물 (신칭) (Fig. 1: A-I)**

**Apterous viviparous female:** Body generally brown. Dorsum of abdomen without maculations. Siphonculi ladderform with reticulation on its apical parts. Siphonculi tapering from base to apical part with reticulation area. Body length 2.57-2.83 mm. Length of antenna 1.42-1.61 mm. Length of 3rd to 6th (base + processus terminalis) antennal segments 0.52, 0.25, 0.26, 0.12+0.23 mm. Length of last segment of rostrum 0.11-0.12 mm. Length of hind tibia 1.05-1.18 mm. Length of siphonculi 0.13 mm. Number of setae on 3rd to 6th antennal segments 12-17, 4-6, 3-7, 2. And 9-16 setae on cauda (Table 1).

**Alate viviparous female:** Body colour yellowish green. Bodyshape oval. Wing with faint



**Fig. 1.** External features of *Periphyllus unmoonsanensis* n. sp.: A-G, alata: A, head; B, antenna; C, ultimate rostrum; D, distal part of hind tibia and tarsus; E, cornicle; F, Cauda; G, fore wing. H-I, aptera: H, cornicle; I, antenna

pterostigma. Caudal shape semicircular. Body length 2.62-3.27 mm. Length of antenna 1.80-1.96 mm. Length of 3rd to 6th (base + processus terminalis) antennal segments 0.56, 0.30, 0.29, 0.12+0.25 mm. Length of last segment of rostrum 0.11-0.12 mm. Length of 2nd tarsal 0.72. length of siphonculi 0.41 mm. Ratio of antennal length to body length 0.61. Number of setae on 3rd to 6th antennal segments 12-16, 4-9, 3-5, 2. Cauda with 9-16. Five setae on 1st tarsal segment. Twelve to 15 setae on cauda. Four pairs of setae on head dorsum. Fourteen to 20 second rhinaria on 3rd antennal segment (Table 2).

**Table 1.** Measurements on apterous viviparous females of *Periphyllus unmoonsanensis* n.sp. (Abbreviations: ind. - individual, cha. - character, ant. - antennae; III, IV, V - antennal segments III, IV, V; VI b - base of the last antennal segment; VI p.t. - processus terminalis of the last antennal segment; l. r. s. - last rostral segment; h. fe. - hind femur; h. ti. - hind tibia; h. 1st ta. - hind 1st tarsus; h. 2nd ta. - hind 2nd tarsus; siphun. - siphunculi) (Size in mm.).

cha.	ind.	1	2	3	4	5	6
body		2.58	2.69	2.57	2.70	2.77	2.75
ant.		1.54	1.53	1.42	1.52	1.61	1.72
III		0.52	0.50	0.47	0.52	0.50	0.55
IV		0.25	0.26	0.23	0.28	0.29	0.31
V		0.26	0.25	0.23	0.22	0.26	0.29
VI b.		0.12	0.12	0.12	0.11	0.13	0.14
VI p.t.		0.23	0.24	0.22	0.25	0.27	0.27
l. r. s.		0.12	0.11	0.12	0.11	0.11	0.11
h. fe.		0.71	0.66	0.62	0.67	0.64	0.69
h. ti		1.18	1.10	1.12	1.06	1.05	1.10
h. 1st ta.		0.05	0.05	0.05	0.05	0.05	0.05
h. 2nd ta.		0.16	0.16	0.15	0.16	0.15	0.15
siphon.		0.10	0.13	0.15	0.15	0.10	0.11

**Table 2.** Measurements on alate viviparous females of *Periphyllus unmoonsanensis* n. sp. (Abbreviations are the same as in Table 1).

cha.	ind.	1	2	3	4	5	6	7	8	9	10
body		3.10	2.77	3.15	2.94	3.27	2.62	2.94	2.92	2.74	2.72
ant.		1.92	1.80	1.84	—	1.96	1.67	1.76	1.79	1.53	1.85
III		0.64	0.60	0.60	0.64	0.55	0.55	0.58	0.58	0.47	0.59
IV		0.32	0.33	0.34	0.31	0.34	0.30	0.32	0.31	0.28	0.32
V		0.31	0.28	0.30	0.31	0.35	0.29	0.30	0.30	0.26	0.31
VI b.		0.14	0.14	0.15	0.12	0.15	0.12	0.13	0.13	0.12	0.13
VI p.t.		0.35	0.30	0.29	—	0.35	0.25	0.29	0.30	0.24	0.34
l. r. s.		0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.12	0.11	0.11
h. fe.		0.81	0.74	0.79	0.80	0.81	0.68	0.74	0.74	0.65	0.71
h. ti		1.33	1.32	1.33	1.31	1.33	1.20	1.20	1.26	1.09	1.27
h. 1st ta.		0.05	0.05	0.06	0.05	0.06	0.05	0.05	0.05	0.05	0.05
h. 2nd ta.		0.16	0.16	0.17	0.15	0.17	0.16	0.16	0.16	0.16	0.16
siphon		0.16	0.15	0.12	0.15	0.16	0.13	0.14	0.14	0.12	0.14

**Specimens examined.** Holotype; 1 alate viviparous female 1, V, 1994, Mt. Unmoonsan, Prov. Kyongsangbuk-do, on *Acer palmatum*. Paratypes: 6 apterous viviparous female, 9 alate viviparous female, same data with holotype.

**Etymology.** This species was named after the collected place, Mt. Unmoonsan.

**Host plant.** *Acer palmatum* Thunb.

**Distribution.** Korea.

**Remarks.** The present species shows some resemblance to *P. acerihabitans* Zhang 1982 in the general features, but is distinguishable from the latter in having longer size of the body and antenna and fewer setae on the head.

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한국산 진사진딧물속(동시목: 진딧물과: 털진딧물아과)의 1신종

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## 요 약

단풍나무(*Acer palmatum* Thunb.)를 기주식물로 하는 한국산 진사진딧물속의 1신종, *Periphyllus unmoonsanensis* n. sp. (운문진사진딧물: 신칭)을 기재한다.